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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/898,554	07/02/2001	Alan R. Tall	64077/JPW/ADM	2853

7590 09/06/2002
John P. White
Cooper & Dunham LLP
1185 Avenue of the Americas
New York, NY 10036

EXAMINER

LI, RUIXIANG

ART UNIT	PAPER NUMBER
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1646

DATE MAILED: 09/06/2002

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/898,554

Applicant(s)

TALL ET AL.

Examiner

Ruixiang Li

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5,9-12 and 37-50 is/are pending in the application.
- 4a) Of the above claim(s) 9 and 42-46 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12,47 and 48 is/are rejected.
- 7) ☒ Claim(s) 1,2,5,10-11,37-41, 49, and 50 is/are objected to.
- 8) ☒ Claim(s) 1,2,5,9-12 and 37-50 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicants' election with traverse of Group I (Claims 1, 2, 5, and 10-12) in Paper No. 8 filed on 07/31/2002 is acknowledged. Further, Applicants' election with traverse of an isolated nucleic acid encoding a protein comprising the amino acid sequence of SEQ ID NO:14 is also acknowledged. The traverse is on the grounds (i) that the claims of Groups I-VIII are related in that they are drawn to nucleic acids encoding LOX-1 receptors, methods of treatment comprising inhibiting LOX-1 receptors. In particular, Group I is drawn to nucleic acids and Group II is drawn to proteins. Thus, two or more independent and distinct inventions have not been claimed in the instant application; and (ii) that there would not be a serious burden on the Examiner if restriction were not required.

This has been fully considered but is not deemed to be persuasive because each group of invention represents a distinct invention for the reasons set forth in the restriction requirement (Paper No. 7, April 30, 2002). The search and consideration of more than one group of invention constitutes an undue search burden on the Examiner. Furthermore, each of the sequences represents a structurally and functionally distinct entity that is capable of supporting a separate patent. The search and consideration of all of the sequences constitutes an undue search burden on the office, given the ever-increasing size of the database.

The requirement is still deemed proper and is therefore made FINAL.

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2. Claims 1, 2, 5, 9-12, and 37-50 are pending. Claims 15, 18-21, 23, and 25-31 have been canceled. Claim 5 has been amended. Claims 1, 2, 5, 10-12, 37-41, and 47-50 are under consideration. All other claims are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Drawings

3. The drawings filed on 07/02/2001 are accepted by the Examiner.

Claim Rejections—35 USC § 112, 1st paragraph

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 12, 47, and 48 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for an isolated cell (a bacterial, amphibian, yeast, fungal, insect, or mammalian cell) comprising a vector comprising the instantly claimed nucleic acid, does not reasonably provide enablement for a cell comprising the above vector or a plant host cell comprising the vector. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with the claim.

Claims 12, 47, and 48 are drawn to a cell comprising a vector comprising the instantly claimed nucleic acid. Thus, the claims read on a cell in a transformed organism, including human which is unpatentable subject matter. The Examiner suggests that the word "isolated" be used to modify the cell in Claim 12 to overcome

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this rejection. In addition, Claim 47 is drawn to a host cell comprising a vector which comprises the nucleic acid encoding a protein with an amino acid sequence set forth in SEQ ID NO: 14. The instant claim recites all types of cells. Despite that the instant specification provides sufficient information on how to make and use a bacterial, amphibian, yeast, fungal, insect, or mammalian cell as a host cell comprising a vector comprising the claimed nucleic acid, the instant disclosure fails to provide working examples, sufficient guidance, or information on how to make and use a plant cell as a host cell comprising a vector comprising the claimed nucleic acid. It is well known in the art that a plant cell has a very thick wall—an elaborate extracellular matrix that encloses each cell in a plant (See, e.g., Alberts et al, *Molecular Biology of the Cell*. Second Edition, Garland Publishing, Inc. New York and London, 1989, pages 1137-1184). There is no indication in the prior art that a plant cell can be transfected successfully with a cloning or expression vector comprising a nucleic acid encoding a mammalian LOX-1 receptor. It is unpredictable whether one skilled in the art can successfully make and use such a plant host cell comprising the claimed nucleic acid without undue experimentation. Therefore, it would require undue experimentation for one skilled in the art to use the claimed broad invention embraced by the instant claim.

It is suggested that the plant cell be deleted from Claim 47 in order to overcome this rejection.

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Claim Objections—Minor Informalities

6. Claims 1, 2, 10-12, 37, 38, and 47-50 are objected to because they recite unelected subject matter (nucleic acid/amino acid sequences). Appropriate correction is required.
7. Claims 5, 39, and 40 are objected to because of the use of an abbreviation "LOX-1" and Claims 39 and 40 depend from Claim 5. Such an abbreviation should be spelled out in the independent claim.
8. Claim 41 is objected to as being dependent upon an objected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
9. The prior art made of record, while being considered to be relevant to applicants' disclosure, does not constitute any basis for rejecting any instant claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruixiang Li whose telephone number is (703) 306-0282. The examiner can normally be reached on Monday-Friday, 8:30 am-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler, can be reached on (703) 308-6564. The fax phone number for this Group is (703) 305-3014 or (703) 308-4242.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [yvonne.eyler@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a

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possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Ruixiang Li
Examiner
August 29, 2002

Elizabeth C. Kemmerer
ELIZABETH KEMMERER
PRIMARY EXAMINER